



Curriculum Document for Mathematics

Course Title: Middle School

Grade: 6

Learner Objective #1: Students will use appropriate vocabulary and reasoning skills when solving and presenting problems.

- Identify the place value of a number.
- Read and write numerals through trillions.
- Read and write numbers using exponents.
- Identify prime numbers.
- Identify the properties of addition.
- Write numbers sentences.
- Write subtraction number sentences.
- Identify the properties of multiplication.
- Identify the parts of a division problem.
- Read and write decimals through hundred thousandths.
- Identify the fractional part of a whole.
- Show ratios and proportions.
- Compare the value of decimals.
- Show equivalent fractions.
- Write percents as ratios, fractions, and decimals.
- Identify the relationship between positive and negative numbers.
- Graph integers.

Learner Objective #2: Students will effectively use numbers for measuring, estimating, and problem solving.

- Round number to the nearest ten through hundred thousand.
- Add whole numbers.
- Solve word problems involving addition.
- Estimate an addition problem.

- Subtract whole numbers with and without renaming.
- Solve word problems involving subtraction.
- Estimate a subtraction problem.
- Identify patterns in multiplication.
- Multiply with 1-3 digit factors.
- Estimate the answer in a multiplication problem.
- Solve word problems involving multiplication.
- Find least common multiples.
- Find common multiples.
- Express numerals in terms of prime factors.
- Find greatest common factors.
- Estimate division problems.
- Find quotient and remainder for any division example.
- Solve word problems involving division.
- Identify and use division rules for 2, 3, 5, 6, 9 and 10.
- Round decimals to the nearest whole number through thousandths.
- Add, subtract, multiply and divide decimals.
- Solve word problems involving decimals.
- Write fractions as decimals.
- Solve problems involving repeating decimals.
- Simplify fractions.
- Rename mixed numbers.
- Add fractions with common and different denominators.
- Add mixed numbers.
- Solve word problems involving addition and subtraction of decimals.
- Subtract fractions with common and different denominators.
- Subtract mixed numbers.
- Estimate addition of fractions.
- Multiply fractions and mixed numbers.
- Divide fractions and mixed numbers.
- Solve word problems involving percents.
- Find the percent of a number.
- Add, subtract, multiply and divide integers.
- Solve word problems involving integers.

Learner Objective #3: Students will use geometric concepts and relationships to interpret, represent, and solve problems.

- Identify and measure angles.
- Identify skew, perpendicular, and parallel lines.
- Identify polygons through ten sides.
- Find perimeter and area of polygons.
- Solve word problems involving geometry.
- Identify types of triangles.

- Find area and circumference of circles.
- Identify congruent and symmetric figures.
- Find volume and surface area of rectangular prism and cubes.

Learner Objective #4: Students will use appropriate tools to measure accurately. Students will use measurements in problem-solving situations.

- Measure in the metric system (Length, Mass, and Volume).
- Add and subtract measure.
- Solve story problems involving measure.
- Change units within the customary system.

Learner Objective #5: Students will use data and statistics in problem-solving situations.

- Solve averaging problems.
- Predict the number of occurrences of a simple event.
- Make and read tables and graphs.
- Solve word problems involving statistics.

Learner Objective #6: Students will use algebraic patterns and generalizations to define and solve problems.

- Solve equations involving addition and subtraction using models.
- Solve equations involving multiplication and division using models.
- Solve problems by using equations.
- Complete function tables.
- Graph functions from function tables.
- Identify and solve inequalities.